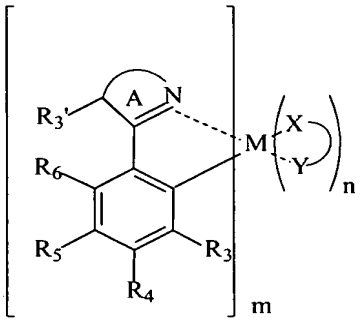
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended) A compound having the structure:



wherein

M is a metal having an atomic weight greater than 40;

R_3' is a substituent selected from the group consisting of alkyl, heteroalkyl, aryl, heteroaryl, and aralkyl, wherein R_3' is optionally substituted by one or more substituents Z;

R_5 is a substituent selected from the group consisting of ~~aryl and heteroaryl~~ phenyl, naphthyl or pyridyl, wherein ~~aryl or heteroaryl~~ phenyl, naphthyl or pyridyl is unsubstituted or optionally, substituted with one or more non-aromatic groups;

ring A is an aromatic heterocyclic or a fused aromatic heterocyclic ring with at least one nitrogen atom that is coordinated to the metal M, wherein the ring A can be optionally substituted with one or more substituents Z;

R_3, R_4, and R_6 are each independently selected from the group consisting of H, alkyl, alkenyl, alkynyl, alkylaryl, CN, perfluoroalkyl, trifluorovinyl, CO_2R, C(O)R, NR_2, NO_2, OR, halo, aryl, heteroaryl, substituted aryl, substituted heteroaryl or a heterocyclic group;

additionally or alternatively, R_3 and R_4, together ~~from~~ form independently a fused 4 to 7-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, or heteroaryl; and wherein said cyclic group is optionally substituted by one or more substituent Z;

each R is independently H, alkyl, alkenyl, alkynyl, heteroalkyl, aryl, heteroaryl, or aralkyl; wherein R is optionally substituted by one or more substituent Z;

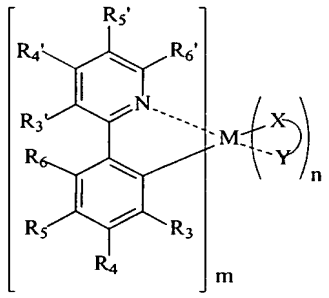
each Z is independently a halogen, R', O-R', $N(R')_2$, SR', C(O)R', C(O)OR', $C(O)N(R')_2$, CN, NO_2, SO_2, SOR', SO_2R', or SO_3R';

each R' is independently H, alkyl, perhaloalkyl, alkenyl, alkynyl, heteroalkyl, aralkyl, aryl, or heteroaryl;

(X-Y) is an ancillary ligand;

m is a value from 1 to the maximum number of ligands that may be attached to the metal; and m + n is the maximum number of ligands that may be attached to the metal.

Claim 2 (currently amended) The compound of claim 1, having the structure:

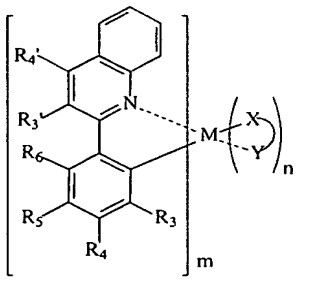


wherein

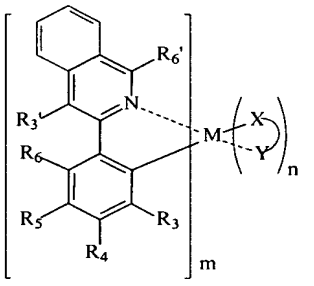
R_4', R_5', and R_6' are each independently H, alkyl, alkenyl, alkynyl, heteroalkyl, aryl, heteroaryl, aralkyl; ~~and wherein R_4', R_5', and R_6' are optionally substituted by one or more substituent Z;~~ and

additionally or alternatively, any one or more of R_4' and R_5', or R_5' and R_6', or R_3 and R_4, together form independently a fused 4- to 7-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, or heteroaryl; and wherein said cyclic group is optionally substituted by one or more substituent.

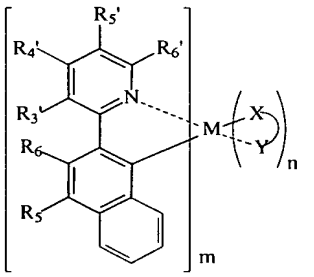
Claim 3 (currently amended) The compound of claim 2, having the structure:



Claim 4 (currently amended) The compound of claim 2, having the structure:



Claim 5 (currently amended) The compound of claim 2, having the structure:

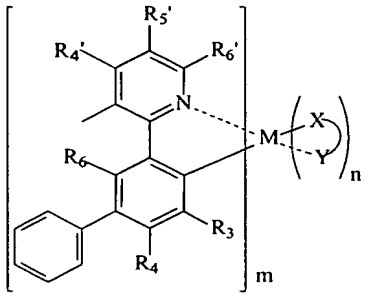


Claim 6 (currently amended) The compound of claim 2, wherein R_5 is substituted or unsubstituted phenyl~~, naphthyl~~ or pyridyl.

Claim 7 (original) The compound of claim 6, wherein R_5 is a phenyl.

Claim 8 (original) The compound of claim 6, wherein R'_3 is a methyl group.

Claim 9 (original) The compound of claim 2, having the structure:

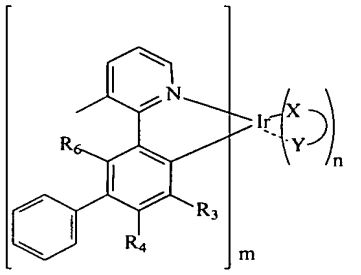


wherein R_5' and R_6' are H, and additionally or alternatively, together form a fused 4- to 7- member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, or heteroaryl.

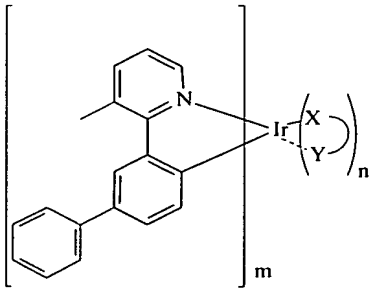
Claim 10 (original) The compound of claim 9, wherein M is selected from the group consisting of Ir, Pt, Pd, Rh, Re, Ru, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.

Claim 11 (original) The compound of claim 10, wherein M is Ir.

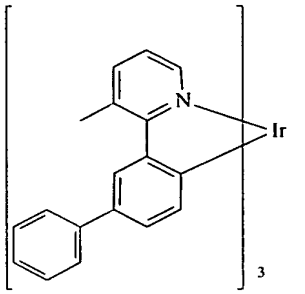
Claim 12 (currently amended) The compound of claim 11, having the structure:



Claim 13 (currently amended) The compound of claim 12, having the structure:

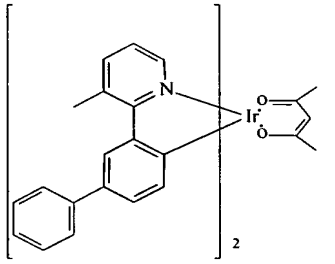


Claim 14 (currently amended) The compound of claim 13, wherein m is 3 and n is zero, such that the compound has the structure:

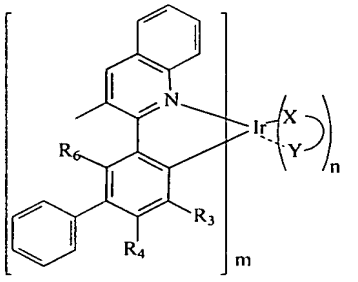


Claim 15 (original) The compound of claim 13, wherein m is 2 and n is 1.

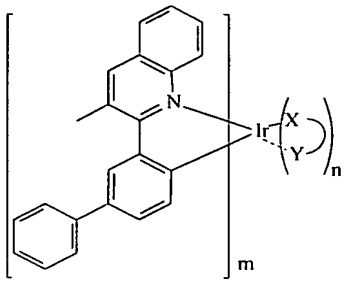
Claim 16 (currently amended) The compound of claim 15, having the structure:



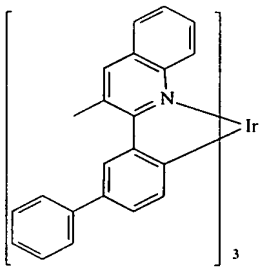
Claim 17 (currently amended) The compound of claim 11, having the structure:



Claim 18 (currently amended) The compound of claim 17, having the structure:

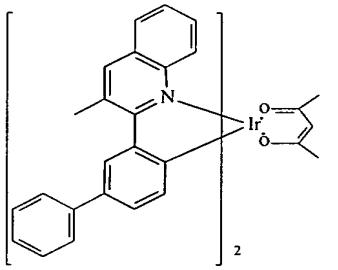


Claim 19 (currently amended) The compound of claim 18, wherein m is 3 and n is zero, such that the compound has the structure:

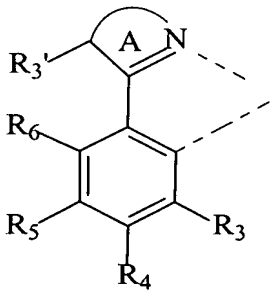


Claim 20 (original) The compound of claim 18, wherein m is 2 and n is 1.

Claim 21 (currently amended) The compound of claim 20, having the structure:



Claim 22 (currently amended) A compound ~~comprising a ligand~~ having the structure:



wherein

R_3' is a substituent selected from the group consisting of alkyl, heteroalkyl, aryl, heteroaryl, and aralkyl, wherein R_3' is optionally substituted by one or more substituent Z;

R_5 is a substituent selected from the group consisting of ~~aryl and heteroaryl~~ phenyl, naphthyl or pyridyl, wherein ~~aryl or heteroaryl~~ phenyl, naphthyl or pyridyl is unsubstituted or optionally, substituted with one or more non-aromatic groups;

ring A is an aromatic heterocyclic or a fused aromatic heterocyclic ring with at least one nitrogen atom that is coordinated to a metal having an atomic weight greater than 40, wherein the ring A can be optionally substituted with one or more substituent Z;

R_3, R_4, and R_6 are each independently selected from the group consisting of H, alkyl, alkenyl, alkynyl, alkylaryl, CN, perfluoroalkyl, trifluorovinyl, CO_2R, C(O)R, NR_2, NO_2, OR, halo, aryl, heteroaryl, substituted aryl, substituted heteroaryl or a heterocyclic group;

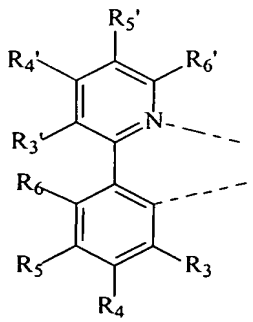
additionally or alternatively, R_3 and R_4, together ~~from~~ form independently a fused 4 to 7-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, or heteroaryl; and wherein said cyclic group is optionally substituted by one or more substituent Z;

each R is independently H, alkyl, alkenyl, alkynyl, heteroalkyl, aryl, heteroaryl, or aralkyl; wherein R is optionally substituted by one or more substituent Z;

each Z is independently a halogen, R', O-R', $N(R')_2$, SR', C(O)R', C(O)OR', $C(O)N(R')_2$, CN, NO_2, SO_2, SOR', SO_2R', or SO_3R';

each R' is independently H, alkyl, perhaloalkyl, alkenyl, alkynyl, heteroalkyl, aralkyl, aryl, or heteroaryl.

Claim 23 (currently amended) The compound of claim 22~~, wherein the ligand has~~ having the structure

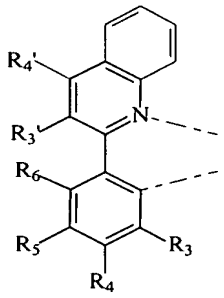


wherein

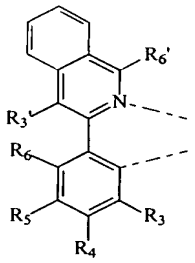
R_4', R_5', and R_6' are each independently H, alkyl, alkenyl, alkynyl, heteroalkyl, aryl, heteroaryl, aralkyl; ~~and wherein R_4', R_5', and R_6' are optionally substituted by one or more substituents Z;~~ and

additionally or alternatively, any one or more of R_4' and R_5', or R_5' and R_6', or R_3 and R_4, together form independently a fused 4- to 7-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, or heteroaryl; and wherein said cyclic group is optionally substituted by one or more substituent Z.

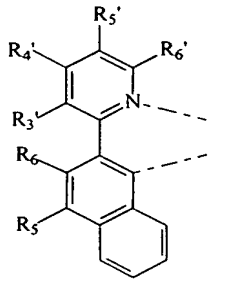
Claim 24 (currently amended) The compound of claim 23~~, wherein the ligand has~~ having the structure:



Claim 25 (currently amended) The compound of claim 23~~, wherein the ligand has~~ having the structure:



Claim 26 (currently amended) The compound of claim 23~~, wherein the ligand has~~ having the structure:

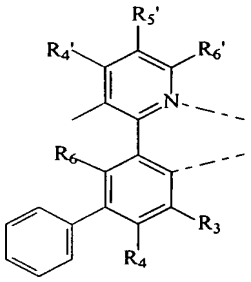


Claim 27 (currently amended) The compound of claim 23, wherein R_5 is substituted or unsubstituted phenyl~~, naphthyl~~ or pyridyl.

Claim 28 (original) The compound of claim 27, wherein R_5 is a phenyl.

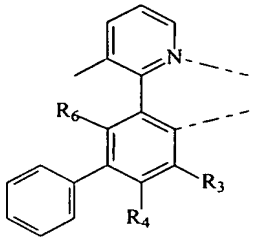
Claim 29 (original) The compound of claim 27, wherein R'_3 is a methyl group.

Claim 30 (currently amended) The compound of claim 23~~, wherein the ligand has~~ having the structure:

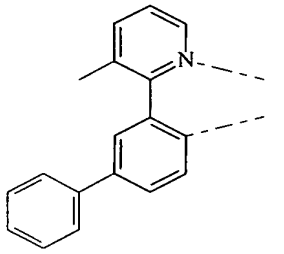


wherein R_5' and R_6' are H, and additionally or alternatively, together form a fused 4- to 7- member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, or heteroaryl.

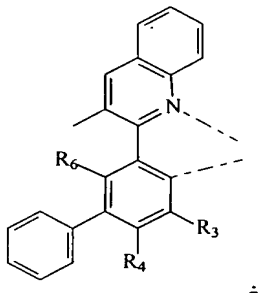
Claim 31 (currently amended) The compound of claim 30~~, wherein the ligand has~~ having the structure:



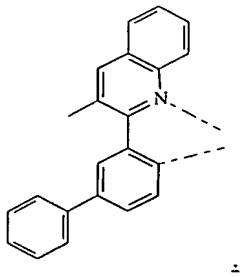
Claim 32 (currently amended) The compound of claim 31~~, wherein the ligand has~~ having the structure:



Claim 33 (currently amended) The compound of claim 30~~, wherein the ligand has~~ having the structure:



Claim 34 (currently amended) The compound of claim 33~~, wherein the ligand has~~ having the structure:

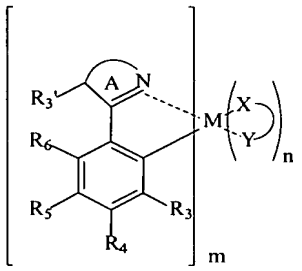


Claim 35 (currently amended) An organic light emitting device, comprising:

(a) an anode;

(b) a cathode; and

(c) an emissive layer disposed between the anode and the cathode, wherein the emissive layer comprises an emissive material having the structure:



wherein

M is a metal having an atomic weight greater than 40;

R_3' is a substituent selected from the group consisting of alkyl, heteroalkyl, aryl, heteroaryl, and aralkyl, wherein R_3' is optionally substituted by one or more substituent Z;

R_5 is a substituent selected from the group consisting of ~~aryl and heteroaryl~~ phenyl, naphthyl or pyridyl, wherein ~~aryl or heteroaryl~~ phenyl, naphthyl or pyridyl is unsubstituted or optionally, substituted with one or more ~~non-aromatic groups~~ substituent Z;

ring A is an aromatic heterocyclic or a fused aromatic heterocyclic ring with at least one nitrogen atom that is coordinated to the metal M, wherein the ring A can be optionally substituted with one or more non-aromatic groups;

R_3, R_4, and R_6 are each independently selected from the group consisting of H, alkyl, alkenyl, alkynyl, alkylaryl, CN, perfluoroalkyl, trifluorovinyl, CO_2R, C(O)R, NR_2, NO_2, OR, halo, aryl, heteroaryl, substituted aryl, substituted heteroaryl or a heterocyclic group;

additionally or alternatively, R_3 and R_4, together ~~from~~ form independently a fused 4 to 7-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, or heteroaryl; and wherein said cyclic group is optionally substituted by one or more substituent Z;

each R is independently H, alkyl, alkenyl, alkynyl, heteroalkyl, aryl, heteroaryl, or aralkyl; wherein R is optionally substituted by one or more substituents Z;

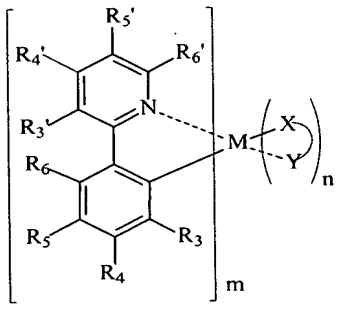
each Z is independently a halogen, R', O-R', $N(R')_2$, SR', C(O)R', C(O)OR', $C(O)N(R')_2$, CN, NO_2, SO_2, SOR', SO_2R', or SO_3R';

each R' is independently H, alkyl, perhaloalkyl, alkenyl, alkynyl, heteroalkyl, aralkyl, aryl, or heteroaryl;

(X-Y) is an ancillary ligand;

m is a value from 1 to the maximum number of ligands that may be attached to the metal; and m + n is the maximum number of ligands that may be attached to the metal.

Claim 36 (currently amended) The device of claim 35, wherein the compound has the structure:

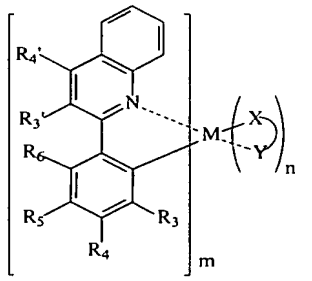


wherein

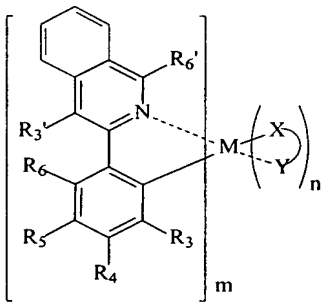
R_4', R_5', and R_6' are each independently H, alkyl, alkenyl, alkynyl, heteroalkyl, aryl, heteroaryl, aralkyl~~; and wherein R_4', R_5', and R_6' are optionally substituted by one or more substituent Z~~; and

additionally or alternatively, any one or more of R_4' and R_5', or R_5' and R_6', or R_3 and R_4, together form independently a fused 4- to 7-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, or heteroaryl; and wherein said cyclic group is optionally substituted by one or more substituent Z.

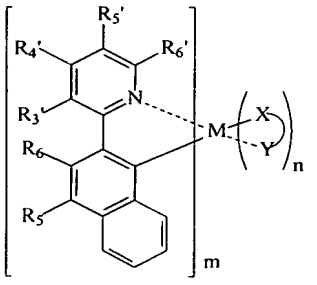
Claim 37 (currently amended) The device of claim 36, wherein the compound has the structure:



Claim 38 (currently amended) The device of claim 36, wherein the compound has the structure:



Claim 39 (currently amended) The device of claim 36, wherein the compound has the structure:

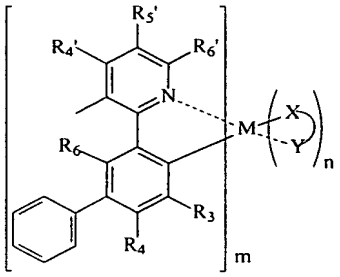


Claim 40 (currently amended) The device of claim 36, wherein R_5 is substituted or unsubstituted phenyl~~, naphthyl~~ or pyridyl.

Claim 41 (original) The device of claim 40, wherein R_5 is a phenyl.

Claim 42 (original) The device of claim 40, wherein R'_3 is a methyl group.

Claim 43 (original) The device of claim 36, wherein the compound has the structure:

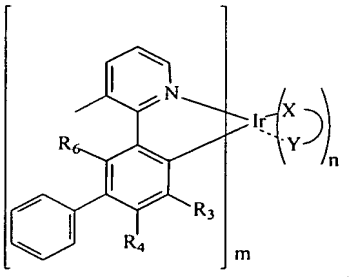


wherein R_5' and R_6' are H, and additionally or alternatively, together form a fused 4- to 7- member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, or heteroaryl.

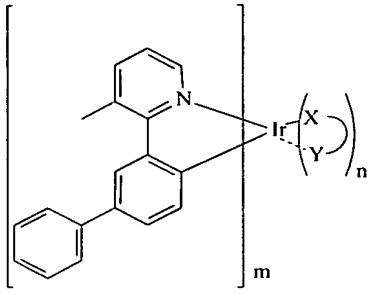
Claim 44 (original) The device of claim 43, wherein M is selected from the group consisting of Ir, Pt, Pd, Rh, Re, Ru, Os, Tl, Pb, Bi, In, Sn, Sb, Te, Au, and Ag.

Claim 45 (original) The device of claim 44, wherein M is Ir.

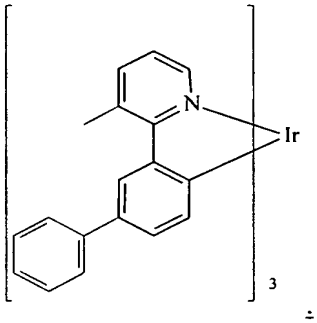
Claim 46 (currently amended) The device of claim 45, wherein the compound has the structure:



Claim 47 (currently amended) The device of claim 46, wherein the compound has the structure:

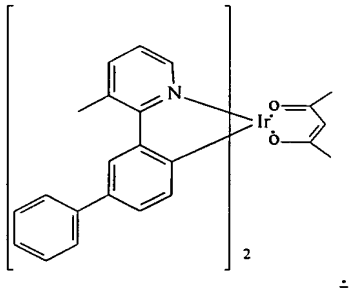


Claim 48 (currently amended) The device of claim 47, wherein m is 3 and n is zero, such that the compound has the structure:

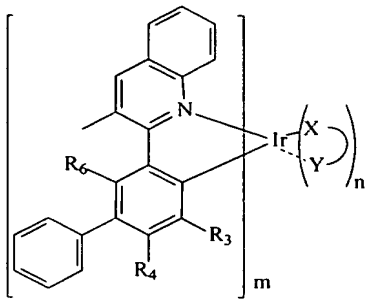


Claim 49 (original) The device of claim 47, wherein m is 2 and n is 1.

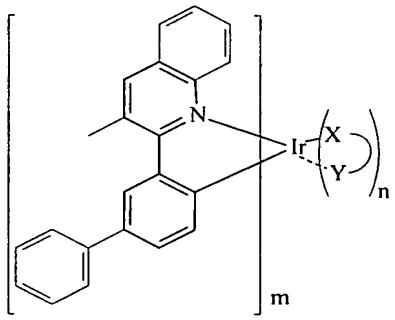
Claim 50 (currently amended) The device of claim 49, wherein the compound has the structure:



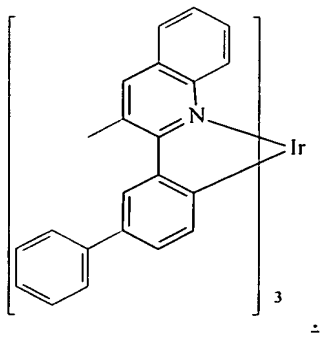
Claim 51 (currently amended) The device of claim 45, wherein the compound has the structure:



Claim 52 (currently amended) The device of claim 51, wherein the compound has the structure:

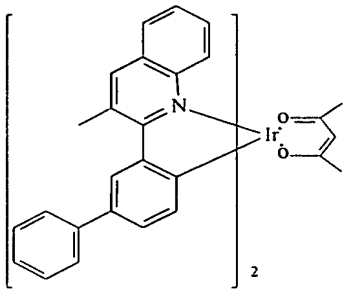


Claim 53 (currently amended) The device of claim 52, wherein m is 3 and n is zero, such that the compound has the structure:



Claim 54 (original) The device of claim 52, wherein m is 2 and n is 1.

Claim 55 (currently amended) The device of claim 54, wherein the compound has the structure:



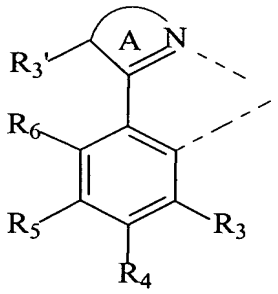
Claim 56 (original) The device of claim 35, wherein the device is incorporated into a consumer product.

Claim 57 (currently amended) An organic light emitting device, comprising:

(a) an anode;

(b) a cathode; and

(c) an emissive layer disposed between the anode and the cathode, wherein the emissive layer comprises an emissive material having a ligand with the structure:



wherein

R_3' is a substituent selected from the group consisting of alkyl, heteroalkyl, aryl, heteroaryl, and aralkyl, wherein R_3' is optionally substituted by one or more substituents Z;

R_5 is a substituent selected from the group consisting of ~~aryl and heteroaryl~~ phenyl, naphthyl or pyridyl, wherein ~~aryl or heteroaryl~~ phenyl, naphthyl or pyridyl is unsubstituted or optionally, substituted with one or more non-aromatic groups;

ring A is an aromatic heterocyclic or a fused aromatic heterocyclic ring with at least one nitrogen atom that is coordinated to ~~the metal M~~ a metal having an atomic weight greater than 40, wherein the ring A can be optionally substituted with one or more substituent Z;

R_3 are each independently selected from the group consisting of H, alkyl, alkenyl, alkynyl, alkylaryl, CN, perfluoroalkyl, trifluorovinyl, CO_2R, C(O)R, NR_2, NO_2, OR, halo, aryl, heteroaryl, substituted aryl, substituted heteroaryl or a heterocyclic group;

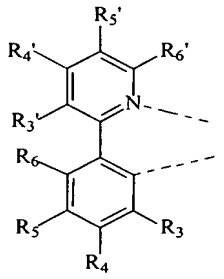
additionally or alternatively, R_3 and R_4, together ~~from~~ form independently a fused 4 to 7-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, or heteroaryl; and wherein said cyclic group is optionally substituted by one or more substituent Z;

each R is independently H, alkyl, alkenyl, alkynyl, heteroalkyl, aryl, heteroaryl, or aralkyl; wherein R is optionally substituted by one or more substituent Z;

each Z is independently a halogen, R', O-R', $N(R')_2$, SR', C(O)R', C(O)OR', $C(O)N(R')_2$, CN, NO_2, SO_2, SOR', SO_2R', or SO_3R';

each R' is independently H, alkyl, perhaloalkyl, alkenyl, alkynyl, heteroalkyl, aralkyl, aryl, or heteroaryl.

Claim 58 (currently amended) The device of claim 57, wherein the ligand has the structure

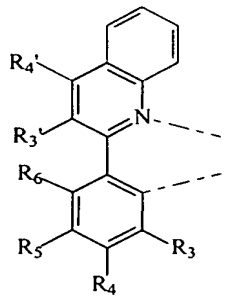


wherein

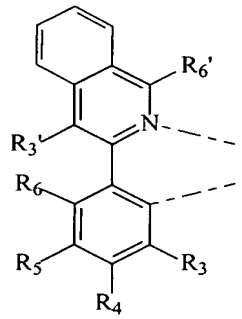
R_4', R_5', and R_6' are each independently H, alkyl, alkenyl, alkynyl, heteroalkyl, aryl, heteroaryl, aralkyl; ~~and wherein R_4', R_5', and R_6' are optionally substituted by one or more substituent Z;~~ and

additionally or alternatively, any one or more of R_4' and R_5', or R_5' and R_6', or R_3 and R_4, together form independently a fused 4- to 7-member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, or heteroaryl; and wherein said cyclic group is optionally substituted by one or more substituent Z.

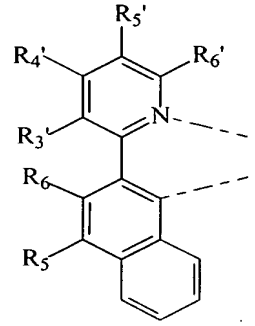
Claim 59 (currently amended) The device of claim 58, wherein the ligand has the structure:



Claim 60 (currently amended) The device of claim 58, wherein the ligand has the structure:



Claim 61 (currently amended) The device of claim 58, wherein the ligand has the structure:

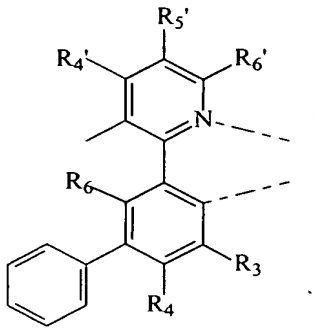


Claim 62 (currently amended) The device of claim 58, wherein R_5 is substituted or unsubstituted phenyl~~, naphthyl~~ or pyridyl.

Claim 63 (original) The device of claim 62, wherein R_5 is a phenyl.

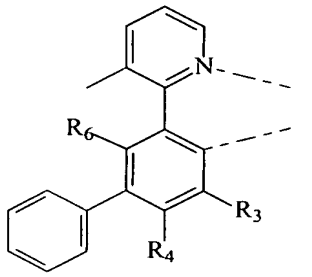
Claim 64 (original) The device of claim 62, wherein R'_3 is a methyl group.

Claim 65 (original) The device of claim 58, wherein the ligand has the structure:

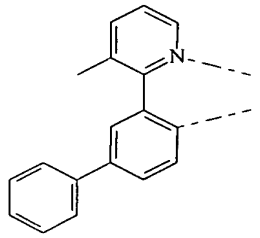


wherein R_5' and R_6' are H, and additionally or alternatively, together form a fused 4- to 7- member cyclic group, wherein said cyclic group is cycloalkyl, cycloheteroalkyl, aryl, or heteroaryl.

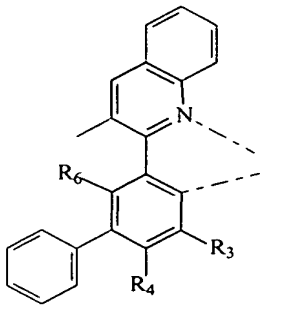
Claim 66 (currently amended) The device of claim 65, wherein the ligand has the structure:



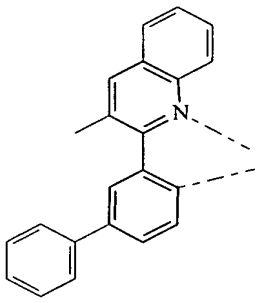
Claim 67 (currently amended) The device of claim 66, wherein the ligand has the structure:



Claim 68 (currently amended) The device of claim 65, wherein the ligand has the structure:



Claim 69 (currently amended) The device of claim 68, wherein the ligand has the structure:



Claim 70 (original) The device of claim 57, wherein the device is incorporated into a consumer product.